# *Salmon River Cooperative Weed Management Area*
# End of Year Report for FY2003

## Introduction:

The Salmon River Weed Management Area (SRWMA) was created in 1994 to bring together those responsible for weed management within the Salmon River drainage, to develop common management objectives, facilitate effective treatment, integrate weed programs and coordinate efforts along logical geographic boundaries with similar lands, use patterns and problem weeds. Cooperating partners include private landowners, county government, state agencies, federal land management agencies, and interested organizations and individuals.

The cooperators jointly:

- Establish Control Priorities.
- Establish specific Weed Management Objectives.
- Create treatment zones within the Management Area.
- Treat individual weed species/infestations.
- Coordinate the use of resources and manpower.
- Develop common inventory techniques and mapping.
- Manage designated noxious weeds in an integrated approach.
- Test the feasibility of new techniques and management strategies.

The following goals guided the development of specific strategies, objectives and priorities that have been integrated into annual management activities:

- Prevent the introduction, reproduction and spread of designated noxious weeds and invasive exotic plants into and within the Salmon River Drainage.
- Reduce the extent and density of established noxious weeds to a point that natural resource damage is within acceptable limits.
- Maintain healthy rangeland and wildland habitat.
- Protect important or critical habitat from weed invasion, including areas that support the federally listed plant MacFarlane's four-o'clock.
- Rehabilitate infested habitats to reduce the susceptibility of re-invasion.
- Implement the most economical and effective weed control methods for the target weed.
- Implement an integrated management system using all appropriate methods.

A spatial inventory across all lands is the foundation of the interagency strategy. The SRWMA has used considerable resources to map and record invasive weeds found within the lower Salmon River Canyon.

The SRWMA partners have been very aggressive in the development of an integrated program that is implemented by all agencies, organizations and landowners in the canyon. An Annual Operating Plan (AOP) provides focus and direction by describing the management actions and activities that the cooperators agree to accomplish for the upcoming year. The accomplishments stated below are a result of the AOP for this past year (FY2003).

## Accomplishments:

### *TREATMENT*

Treatment within the Salmon River Management is guided by a strong objective-priority system that is agreed to by the cooperating partners each year. Treatment crews focus on the most important weeds first and may return to the same site many times to insure that the objectives for the year are accomplished. Each weed in the following tables has been given an Objective-Priority Code that relates to the planned management outcome and the relative importance of the treatment. This coding system provides operational guidance during the year to field crews and landowners on where to place limited resources to obtain the most effective long-term results.

**Objective**
1. *Eradicate*
2. *Eradicate Satellites*
3. *Control*
4. *Contain*
5. *Slow Spread*

**Priorities**
- *C. Critical*
- *H. High*
- *M. Medium*
- *L. Low*

## Monitoring of Eradicated Weeds.

The sustained management of invasive weeds requires continued monitoring of all known infestations that have been eradicated from the Salmon River Weed Management Area. For the following weeds, resources were committed to ensure monitoring of sites and necessary follow-up treatment to eliminate new plants that may have been found. The sites where the five weeds were found were monitored a minimum of three visits through out the field season. Five weeds have been eradicated from the SRWMA as a result of the cooperative partnership effort over the past 7 years.

| WEED | RESULTS |
|---|---|
| Johnsongrass | No weeds were found |
| Perennial peavine | No weeds were found |
| Musk thistle | No weeds were found |
| P loosestrife | No weeds were found |
| Buffalo Burr | No weeds were found |

## Eradication of New Invasive Weeds

High Priority for treatment was invasive weeds with an Eradication Objective. This objective required committing significant resources to ensure complete elimination of seed production for the entire infestation. As a result of the intense effort and small isolated infestations, treatment costs are the highest on a total acre basis.

| WEED | ACRES | OBJ-PRI | AGENCY |
|---|---|---|---|
| Dyer's woad | 0.25 | 1C | NPNF |
| Orange hawkweed | 4.00 | 1C | NPNF |
| Orange hawkweed | 15.00 | 1C | IDCO |
| Meadow Hawkweed | 4.00 | 1C | IDCO |
| Perennial pepperweed | 0.10 | 1C | NPNF |
| Scotch broom | 0.10 | 1C | NPNF |
| Leafy spurge | 25.70 | 1H | IDCO |
| Russian knapweed | 1.00 | 1H | NPNF |
| Russian knapweed | 97.00 | 1H | IDCO |
| Diffuse knapweed | 32.10 | 1H | IDCO |
| Toothed spurge | 110.00 | 1M | ITD |
| Toothed spurge | 6.60 | 1M | IDCO |
| **TOTAL** | **295.85** | | |

**Highlight**: Idaho Weed Control, Idaho Transportation Department and Nez Perce National Forest took the lead during the 2003 field season to focus resources on the eradication of new invasive plants. The University of Idaho Early Detection Team assisted the SRWMA (est. 150 person hrs) with early detection/eradication survey of three weeds. The team surveyed for Orange Hawkweed, Matgrass, and Dyer's woad. These surveys were a critical component of the eradication process implemented in the WMA. The true cost of eradication is reflected in the entire management system not just treatment of the target weed. Therefore, partner contributions include the implementation of the entire eradication process in the weed management area. This strategy is a continuation of the eradication process the partnership has developed over the past 4 years and is reflected in the priority system and long-range plan.

## Eradication of Satellites Infestations

Second general priority for treatment was satellite infestations of invasive weeds and the eradication of yellow starthistle in the South and West Management Zone. Idaho County Weed Control provided assistance to private landowners who agreed to treat satellite infestations of yellow starthistle.

| WEED | ACRES | OBJ-PRI | AGENCY |
|---|---|---|---|
| Japanese knotweed | 1.50 | 2H | NPNF |
| Japanese knotweed | 1.20 | 2H | IDCO |
| Rush skeletonweed | 10.40 | 2H | BLM |
| Rush skeletonweed | 110.25 | 2H | NPNF |
| Rush skeletonweed | 259.50 | 2H | IDCO |
| Spotted knapweed | 11.60 | 2H | BLM |
| Spotted knapweed | 141.00 | 2H | NPNF |
| Spotted knapweed | 684.75 | 2M | IDCO |
| Yellow starthistle | 1987.70 | 2H | IDCO |
| Yellow toadflax | 0.50 | 2H | NPNF |
| **TOTAL** | **3208.4** | | |

**Highlight**:
Idaho County Weed Control organized and managed an aggressive aerial program associated with ISDA costshare. Over 2000 acres were treated with a contract helicopter from Riggins Idaho. The project directly involved 30 landowners and covered private, state and BLM lands. Overall production was less than last year due to the timing of project funds.

## Control Lines for Invasive Weeds, and Transportation Corridors

For the SRWMA third priority are transportation networks and the establishment of battle lines. The SRWMA Management Plan (v.2000) outlines Two Management Zones for yellow starthistle. Management objective for the starthistle South Zone is eradication of satellites and the prevention of additional patches. Treatment accomplishments for the South Zone in 2003 are outlined in the previous section. The following data specifies the treatments for widespread, established weeds, with a control objective.

| WEED | ACRES | OBJ-PRI | AGENCY |
|---|---|---|---|
| Common crupina | 2.60 | 3H | NPNF |
| Yellow starthistle | 5.50 | 3H | BLM |
| Yellow starthistle | 447.00 | 3H | IDCO |
| Whitetop | 0.25 | 3M | BLM |
| Scotch thistle | 3.40 | 3M | BLM |
| Scotch thistle | 0.25 | 4H | NPNF |
| Scotch thistle | 199.50 | 3M | IDCO |
| Field bindweed | 10.80 | 4M | BLM |
| Dalmatian toadflax | 59.00 | 3M | IDCO |
| Dalmatian toadflax | 17.20 | 3H | BLM |
| HY95 | 345.50 | 3H | ITD |
| **TOTAL** | **1091** | | |

**HIGHLIGHT**: The transportation network is the primary vector for weed spread in the lower Salmon River drainage. Idaho Transportation Department and Idaho County have taken the lead to aggressively treat target invasive plants along key transportation complexes across the WMA. Much of the work focused on spread vectors or weeds found in susceptible habitat. The long-term strategy is to contain the spread and to find methods to reduce the inherent susceptibility of the lands. The investment in containing advancing weeds including those found in recently burned areas is critical to the success of the other higher priorities such as eradication and prevention.

## Reduce Density and Spread: Biological Control

| WEED | ACRES | OBJ-PRI | AGENCY |
|---|---|---|---|
| Annual Grasses | 3.80 | 5M | IDCO |
| Annual Bromes | 2.00 | 5H | NPNF |
| Canada thistle | 2.80 | 5H | BLM |
| Canada thistle | 302.45 | 5M | IDCO |
| Puncturevine | 19.25 | 5M | NPNF |
| Oxeye daisy | 0.50 | 5M | NPNF |
| Dog rose | 89.00 | 5H | IDCO |
| **TOTAL** | **419.8** | | |

**Highlight**:
The biological control emphasis for this past year was the redistribution of *Eustenopus villosus*, a seedhead weevil, on yellow starthistle and the continued monitoring and assessment of insect establishment and effect.

**Total Treatment for FY2003 across all priority areas: 5015 acres**.

## *PREVENTION*

One of the critical elements of noxious weed management is to reduce the susceptibility of lands to future invasion. Too often managers target weeds without regard to what plants may return after the treatment. As a result one weed may be replaced with another more aggressive and difficult weed. The SRWMA has embarked on a series of re-vegetation projects to find a local solution to reducing the susceptibility of many areas in the Salmon River Canyon. These feasibility trails began in 1996 using a combination of herbicides, grass seed and sheep trampling. In 1997 and 1998 the SRWMA used cattle to incorporate seed. In the spring of 2000 a series of plots were established that tested the feasibility of a combination of herbicide treatment, goats and grass seed. In 2003 Ray Holes Jr. continued to work towards integrating goat grazing into an overall restoration strategy for large dominating infestations of yellow starthistle. Additional prevention practices included:

- *The application of certified weed free straw for fire restoration.*
- *The contract requirement to wash off-road equipment as part of Forest Service contracts.*
- *The development of local volunteer inspectors as part of the certification process for weed free hay and straw. The county certified approximately 1000 tons of forage.*
- *Washing equipment during suppression actions on wild Fire.*
- *The completion of a susceptibility model and weed risk assessment for the Salmon River Canyon Project*.

## *INVENTORY*

Maintenance of an inventory is an important task to the SRWMA. The inventory is updated every year after the field season is over. The updates include all the designated weeds across all lands in the canyon. The information is recorded on base maps, digitized and stored in GIS. The weed inventory is maintained as one integrated database for the entire canyon.

The University of Idaho Early Detection Team assisted the SRWMA (100 person hrs) with early detection/eradication survey of four weeds in the Salmon River Canyon. The team located and mapped toothed spurge, Dyer's woad, matgrass and Japanese knotweed.

## *EDUCATION/PUBLIC AWARENESS*

Public awareness is an on-going activity in the Salmon River Canyon. A series of projects were completed during the year to inform the general public of the effects of invasive weeds in the Salmon River Canyon. Education and Public awareness activities conducted in the Salmon River Canyon include:

- *A weed display for the Idaho County Fair.*
- *A field trip for Treasure Valley Community College weed management class.*
- *A field trip for Asotin County Cattleman Association.*
- *A field trip for University of Idaho Range mgt class.*
- *A Public Workshop on integrating weed mgt and range management.*
- *A calibration workshop for the public was conducted at the Slate Creek Ranger Station.*
- *Maintenance of 15 road signs to inform the public about weed free hay requirements on Forest Service administered lands.*
- *Weed awareness posters at campgrounds and trailheads*.

Top to Bottom: ***Asotin Cattleman, University of Idaho and Treasure Valley Community College Field Days.***

Over 100 individuals attended the three fieldtrips and range management workshop organized by the SRWMA. Discussion topics included integrated weed management, landscape strategies, coordination, information management, and integrating livestock management for the control invasive plants.

The SRWMA sponsored a Calibration workshop for agency employees and private landowners. Calibration of ground based operations is an important step to ensure that herbicides are applied properly. The workshop also provided individuals the opportunity to interact with Dupont representative, John Catlon, to discuss techniques and herbicide strategies. Participants were able to determine their individual calibration by time spraying a known area, and then calculating the volume sprayed by measuring the volume into a container.

## *MONITORING*

Approximately 145 herbicide applications were visually monitored after treatment during the 2003 field season.

Entomologists from Forest Service Research and Forest Health Protection group of the Forest Service assisted in monitoring yellow starthistle seedhead flies and weevils. Fifteen (15) sites were monitored to determine if the insects had established at the release site and if plant damage was detectable. Two releases of *Mecinus janthinus*, a root-boring moth on dalamatian toadflax, were also monitored by the University of Idaho. An assessment by Forest Service Entomologist on Rush steletonweed agents was conducted in the Allison Creek area.

***Long Term Weed Monitoring***

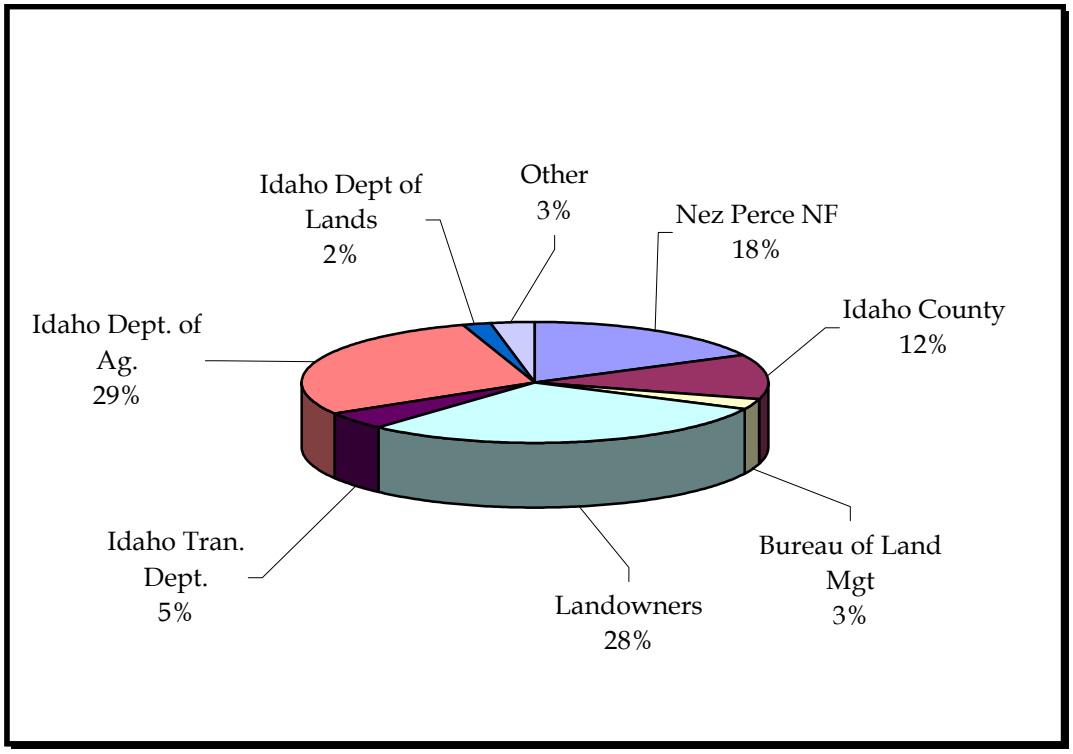
Twenty weed monitoring transects associated with Taco and Kelly Cr. fires were reread in 2003. Frequency and density were collected for spotted knapweed, rush skeletonweed, sulfur cinquefoil, St. Johnswort and other invasive plants found in the Salmon Canyon. The objective of the monitoring is to determine if weeds are spreading or increasing in density as a result of fire. These transects are permanently monumented and will be re-measured next year, and periodically in the future.

*Dog rose*

*sulfur cinquefoil*

*G. CONTRIBUTIONS*

For this year direct contributions toward all SRWMA programs and projects totaled $510,000.00. This included personnel, equipment, supplies and services that were used to accomplish the management elements outlined in the Annual Operating Plan for FY2002. The pie chart displays the general percentages of the contributions. The "Other" category includes important contributions made by the University of Idaho, Dow AgroScience and Dupont.



# Salmon River Weed Management Area
# Steering Committee

| Name | Agency | Address | |
|---|---|---|---|
| Carl Crabtree | Idaho County Weed Control | Grangeville, Idaho | Chair ccrabtree@idahocounty.org |
| Leonard Lake | Nez Perce National Forest | Grangeville, Idaho | Co-Chair llake@fs.fed.us |
| Don Sorensen | Nez Perce National Forest | Slate Creek, Idaho | |
| Dean Huibregtse | Cottonwood Resource Area BLM | Cottonwood, Idaho | |
| Rikki Osborn | Idaho Department of Transportation | Lewiston, Idaho | |
| Tom Hawkens | Idaho Department of Land | Craigmont, Idaho | |
| Doug Boggan | Landowner | Riggins, Idaho | |
| Carl Skyrman | Landowner | Riggins, Idaho | |
| Norman & Joyce Close | Landowner | Riggins, Idaho | |
| Ernie Robinson | Landowner | White Bird, Idaho | |
| Heckman Ranches | Landowner | White Bird, Idaho | |
| Ralph Lamb | Landowner | White Bird, Idaho | |
| Ray & Marianne Holes | Landowner | White Bird, Idaho | |
| Margie Wright | Landowner | White Bird, Idaho | |

**Salmon River Weed Management Area**
**Appendix II**
**Cost Share Project Summary**

| *PROJECT: ERADICATION OF PRIORITY WEEDS* | |
|---|---|
| **Weed** | **Acres Treated** |
| Orange hawkweed | 19.00 |
| Meadow Hawkweed | 4.00 |
| Perennial pepperweed | 0.10 |
| Scotch broom | 0.10 |
| Leafy spurge | 25.70 |
| Russian knapweed | 99.00 |
| Diffuse knapweed | 32.10 |
| Toothed spurge | 116.60 |
| **TOTAL ACRES TREATED** | **296.6** |
| | |
| *PROJECT: CONTROL OF PRIORITY SATELLITES* | |
| **Weed** | **Acres Treated** |
| Japanese knotweed | 2.70 |
| Rush skeletonweed | 355 |
| Spotted knapweed | 800 |
| Yellow toadflax | 0.50 |
| **TOTAL ACRES TREATED** | **1158.2** |
| | |
| *PROJECT: AERIAL TREATMENT* | |
| **Weed** | **Acres Treated** |
| Yellow starthistle | 2055 |
| Spotted knapweed | 40 |
| Rush skeletonweed | 25 |
| **TOTAL ACRES TREATED** | **2120.00** |
| | |